

TWO NEW CUMACEA FROM SOUTH AFRICA

By HERBERT M. HALE *

[Read 14 August 1952]

595.381 (68)

Fig. 1-4.

I am indebted to Dr. J. H. Day, Professor of Zoology at the University of Cape Town, for the opportunity of examining a small collection of Cumacea secured during the course of an ecological survey of the estuaries and shallow waters of the Union of South Africa.

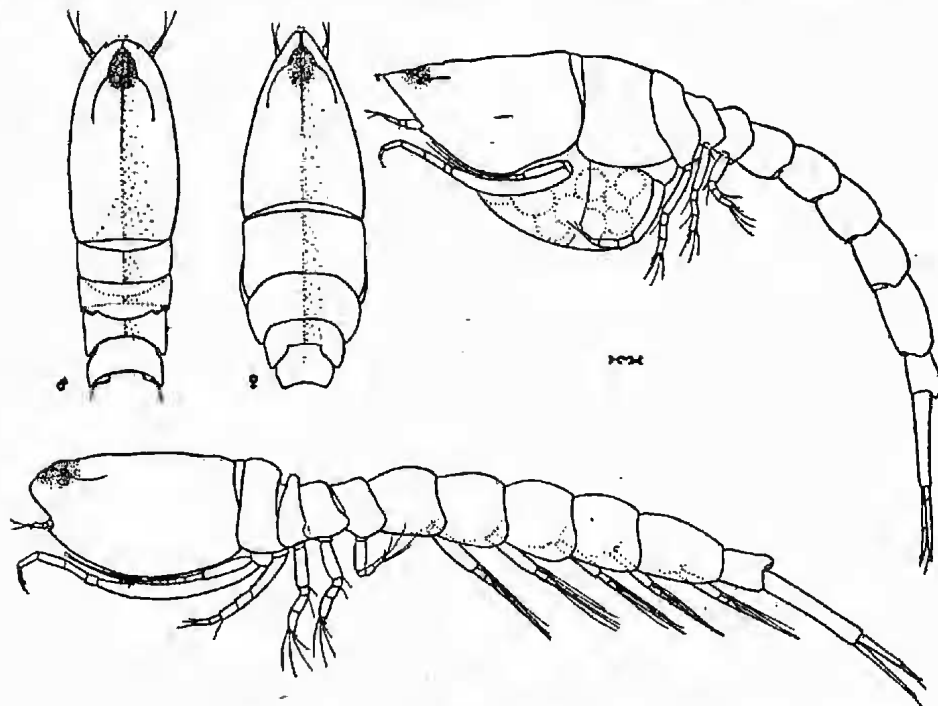


Fig 1

Iphinoe brevidactyla, type male and female from the side and cephalothorax from above (x 28).

Cumacea were collected at four different localities and two species are represented; both are described herein as new.

Genus IPHINOE Bate

Iphinoe brevidactyla sp. nov.

Ovigerous female.—Carapace with a low median carina and with dorsal edge, as seen from the side, almost straight, slightly irregular but without serrations; it is one-fourth of the total length of animal, as wide as deep and seen from above is subtriangular in shape. Pseudorostrum about one-tenth of length of carapace, the lobes, as seen from above, very narrowly rounded apically and meeting towards their anterior ends. Antennal notch small, shallow and antennal tooth subacute. Ocular lobe wider than long, darkly pigmented and with lenses not distinct.

* Director, South Australian Museum.
Trans. Roy. Soc. S. Aust., 76, December, 1953

The first of the five exposed pedigerous somites is short, the second long, about equal in length to the third and fourth somites together; the second to fourth somites have a low median dorsal carina.

Pleon a little shorter than cephalothorax and pedigerous somites together; telsonic somite slightly produced between bases of peduncles of uropods.

First antenna with third segment two-thirds as long as first, only about one-third as long again as second, and more than twice as long as the two-jointed flagellum.

Second maxillipeds with ischium, merus and carpus apically obliquely truncate; merus and carpus subequal in length and ischium almost half as long again as either.

Basis of third maxilliped (including outer lobe in length) more than half as long again as rest of limb; the outer lobe is rounded and subtruncate apically and reaches to level of middle of length of merus; the last-named is very little produced at anterior end and is distinctly longer than the carpus, which is broad, somewhat dilated apically, the anterior margin subtruncate and not forwardly produced; propodus broadly subtriangular in shape, about half as long as merus and little longer than the narrow dactylus.

First peraeopod with carpus reaching a little beyond level of antennal tooth; basis more than one-third as long again as remaining joints together; merus and carpus equal in length, propodus a little shorter than either and twice as long as dactylus.

Basis of second peraeopod barely longer than rest of limb; carpus distinctly longer than either merus or dactylus and twice as long as propodus; longest dactylar spine equal in length to dactylus.

Fossorial limbs with propodus and dactylus unusually short, together only about one-third as long as carpus, which is subequal in length to ischium and merus together; two of the subterminal carpal setae are as long as merus, carpus, propodus and dactylus together and reach to level of tip of the longest propodal seta.

Peduncle of uropod unarmed, half as long again as either of the rami, which are of equal length; exopod with four strong setae on inner margin of second segment and with two unequal terminal spines; first segment of endopod three-fourths as long again as second and with two subterminal inner spines of about equal length; second segment of endopod with two unequal terminal spines; remainder of inner edge of both endopodal segments margined with hyaline serrations.

Colour—Anterior half of carapace dark brown fading to yellowish posteriorly. Posterior half of second pedigerous somite and greater part of remaining somites suffused with brown. Basis of first peraeopods and posterior oostegites with dark brown markings.

Length 3.2 mm.

Adult Male—The carapace is more than one-fourth of the total length and as seen both from above and from the side is suboval in shape; as in the female the dorsal margin in lateral view is slightly irregular but without serrations. Pseudorostrum shorter than in female, somewhat downbent in front, the lobes meeting towards their rounded apices. Antennal notch wider than in female and ocular lobe larger with the lenses more distinct.

Second pedigerous somite not differing much in length from third to fifth somites.

Pleon longer than cephalothorax and pedigerous somites together; telsonic somite rounded posteriorly.

Second antenna with flagellum reaching to just beyond end of peduncle of uropod.

Third maxillipeds with basis more than twice as long as rest of limb; otherwise as in female.

First peraeopod as in female except that basis is more than half as long again as remaining joints together.

Basis of second peraeopod shorter than rest of limb; longest dactylar spine as long as propodus, and dactylus together. Fossorial limbs as in female.

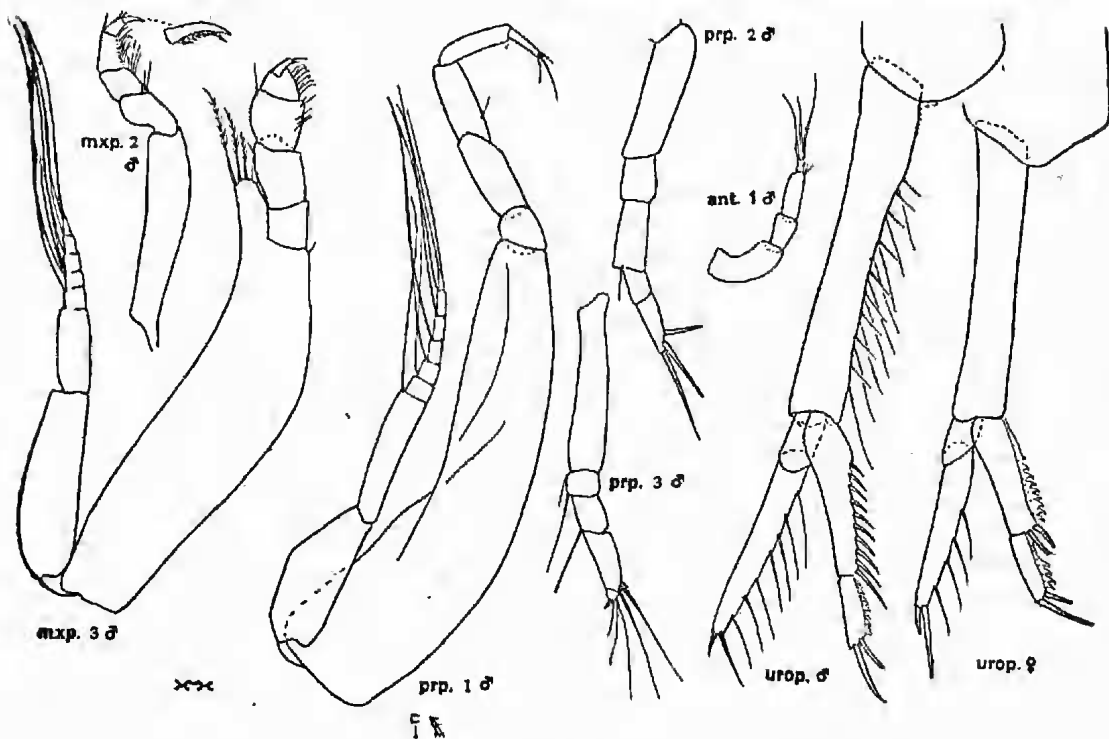


Fig. 2

Iphinoe brevidactyla, paratype male and ovigerous female; ant. 1, first antenna; mxp. 2-3, second and third maxillipeds; prp. 1, 2 and 3, first, second and third peraeopods; urop., uropods (all $\times 80$).

Peduncle of uropod half as long again as either of rami and armed on inner edge (for posterior three-fourths of length) with two series of setae; exopod equal in length to endopod and with seven long setae on inner margin and two unequal terminal spines; endopod with first segment twice as long as second, its inner margin armed with ten spines, which successively increase in length, the posterior one being about equal in length to the longer of the unequal terminal spines of the second segment, which has inner hyaline serrations as in the female.

Colour—General colouration as in female, *viz.*, yellow ground colour largely suffused with dark brown.

Length 3.35 mm.

Locality—Union of South Africa: Langebaan Lagoon; from bottom in mid-channel and dredging in 3-8ft. water at high tide, on fine sand with patches of sandy mud (April 1949).

In *crassipes* Hansen and *pellucida* Hale the first segment of the endopod of the uropod is longer than the second, as in the species described above; both of them differ, however, in having the dactylus of the three posterior pairs of pereopods relatively long and slender.

I. crassipes has been recorded from South Africa (Stebbing 1910; p. 412, pl. xlv). It differs further from *brevidactyla* in having the pseudorostrum upturned, while the third maxilliped has the merus greatly produced forwards and the carpus and propodus slender, not at all dilated.

The third maxilliped of the Australian *pellucida* (Hale 1944, p. 231, fig. 5-6) is also very different from that of *brevidactyla*, and the setae of the fossorial limbs are much shorter and stouter.

Iphinoe truncata sp. nov.

Ovigerous female—Carapace with a median longitudinal keel anteriorly, merging into a shallow groove with slightly raised edges in posterior half, and with upper margin, when viewed from the side, almost straight, a little

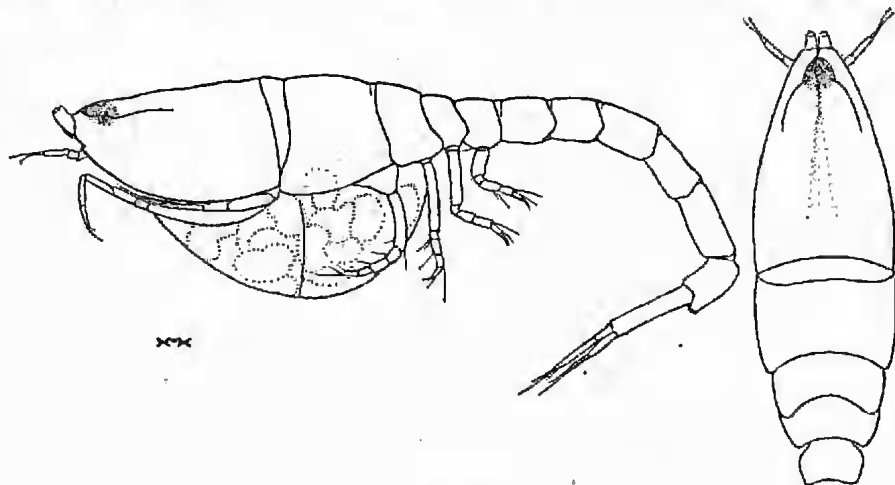


Fig. 3

Iphinoe truncata, type female; lateral view and cephalothorax from above (x 28).

irregular but without serrations; it is somewhat wider than deep, half as long again as broad and is one-fourth of total length of animal; seen from above it is subtriangular in shape, the sides gently curved and narrowly truncate anteriorly. Pseudorostrum short, the lobes truncate in front when seen from the side as well as in dorsal view, and meeting in front of the ocular lobe, which is as wide as long and darkly pigmented, the lenses indistinct. Antennal notch small, rather narrow, and tooth subacute (fig. 4, c. pace).

Second pedigerous somite half as long again as third, fourth or fifth somites, and first very short.

Pleon distinctly shorter than cephalothorax and pedigerous somites together; telsonic somite rounded posteriorly and a little produced between bases of peduncle of uropods.

First antenna with third segment about as long as first, three-fourths as long again as second, and two and one-half times as long as the two-jointed flagellum. Second antenna very small, two-segmentate (fig. 4, ant.).

Ischium of second maxilliped with anterior margin obliquely truncate; carpus barely longer than either ischium or merus and fully twice as long as propodus.

Basis of third maxilliped broad, its length (including outer lobe) half as long again as remaining joints together; the rounded outer lobe reaches to level of three-fourths of length of merus, which is widened to form an outer lobe, distally truncate and not at all produced forwards; carpus barely longer than merus, widened and truncate distally; propodus only about two-thirds as wide as and little shorter than carpus, and nearly twice as long as the slender dactylus.

Basis of first peraeopod stout, barely as long as rest of limb; carpus a little longer than propodus, about half as long again as either merus or dactylus and reaching to level of antennal tooth.

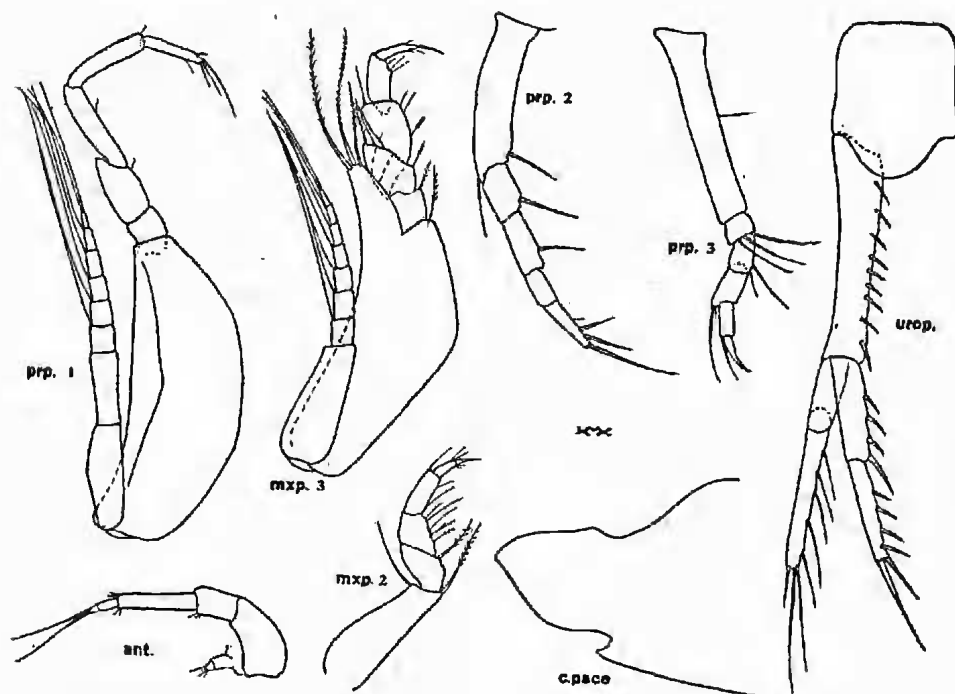


Fig. 4

Iphinoe truncata, paratype ovigerous female; ant., first and second antennae; mxp. 2-3, second and third maxillipeds; prp. 1, 2 and 3, first, second and third peraeopods; urop., telsonic somite and uropod; c. pace., pseudorostral lobe (all $\times 80$).

Second peraeopod with basis shorter than remaining joints together; carpus little longer than either merus or dactylus and less than twice as long as propodus; longest dactylar spine equal in length to propodus and dactylus together.

Third to fifth peraeopods with merus, propodus and dactylus subequal in length and propodus only a little shorter; the longest carpal seta and the propodal seta reach to level of tip of dactylus; in the third peraeopods the basis is one-third as long again as rest of limb.

Peduncle of uropod barely longer than either of the rami (which are of equal length) and armed with nine or ten spines not differing much in size; exopod with five long setae on inner margin of second segment, which carries three terminal spines, the longest of which is distinctly more than half as long as exopod; endopod with first segment equal in length to second and

furnished on inner margin with four spines, the distal one subterminal and larger than the others, second segment of endopod with four spines on inner margin and with two unequal terminal spines, the longer equal in length to the segment.

Colour—Ground colour pale yellow, irregularly mottled with large dark brown chromatophores.

Length 3.56 mm.

Male—Only a single small example is available. In this the pseudorostrum is more downbent than in the female, the ocular lobe is larger and the first pedigerous somite is very small. The pleon is longer than the cephalothorax and pedigerous somites together. Peraeopods and uropods much as in female.

Length 2.0 mm.

Locality—Union of South Africa: The Haven, mouth of Njanya River; from top 2 inches of sand, clean with some detrius, no mud (Jan., 1950): St. Johns, Second Beach, from clean sand at mouth of estuary (type male, January, 1950); Umkomaas, at mouth of Umzimbazi River. from muddy sand and amongst stones (type ovigerous female January, 1950).

Ovigerous females vary in size; two of the examples taken with the type female are only 2.7 mm. in length and several from the other localities are under 3 mm. There is little variation in the armature of the uropods but the first joint of the endopod may be barely shorter than the second.

Most species of the genus differ from *truncata* in having the segments of the endopod of the uropod decidedly unequal in length. In those in which these segments are subequal the carapace has mid-dorsal serrations in at least the female.

REFERENCES

- HALE, HERBERT M. 1944 Trans. Roy. Soc. S. Aust., 68, (2), 225-285
 STEBBING, T. R. R. 1910 Ann. S. Afr. Mus., 6, 281-594